

## CLAIMS

What is claimed is:

1. An assay for detection of CD30 or CD30-L in a sample, comprising contacting the sample with a substantially homogeneous purified CD30-L polypeptide capable of binding CD30, wherein said CD30-L polypeptide is encoded by a DNA sequence that will hybridize to the nucleotide sequence presented in SEQ ID NO:19 or SEQ ID NO:23 under severely stringent conditions, and detecting binding of the sample thereto.
2. The assay of claim 1 which is a competitive binding assay.
3. The assay of claim 2, in which the CD30-L polypeptide is conjugated to a detectable moiety and used to detect binding of the sample to intact cells expressing cell surface CD30.
4. The assay of claim 3, in the detectable moiety is selected from the group consisting of radionuclides, chromophores, an enzyme that can catalyze a colorimetric reaction, an enzyme that can catalyze a fluorometric reaction, biotin, and avidin.
5. The assay of claim 2, in which the CD30-L polypeptide is conjugated to a detectable moiety and used to detect binding of the sample to a CD30 polypeptide bound to a solid phase.
6. The assay of claim 5, in the detectable moiety is selected from the group consisting of radionuclides, chromophores, an enzyme that can catalyze a colorimetric reaction, an enzyme that can catalyze a fluorometric reaction, biotin, and avidin.
7. An assay to detect cells expressing CD30 in a sample, comprising contacting the sample with a substantially homogeneous purified CD30-L polypeptide capable of binding CD30, wherein said CD30-L polypeptide is encoded by a DNA sequence that will hybridize to the nucleotide sequence presented in SEQ ID NO:19

or SEQ ID NO:23 under severely stringent conditions, and detecting binding of the CD30-L polypeptide the cells.

8. The assay of claim 7, wherein the CD30-L polypeptide is conjugated to a detectable moiety selected from the group consisting of radionuclides, chromophores, an enzyme that can catalyze a colorimetric reaction, an enzyme that can catalyze a fluorometric reaction, biotin, and avidin.

9. An assay to detect soluble CD30 in a sample, comprising contacting the sample with a substantially homogeneous purified CD30-L polypeptide capable of binding CD30, wherein said CD30-L polypeptide is encoded by a DNA sequence that will hybridize to the nucleotide sequence presented in SEQ ID NO:19 or SEQ ID NO:23 under severely stringent conditions, and detecting binding of the CD30-L polypeptide to the soluble CD30.

10. The assay of claim 9, wherein the CD30-L polypeptide is conjugated to a detectable moiety selected from the group consisting of radionuclides, chromophores, an enzyme that can catalyze a colorimetric reaction, an enzyme that can catalyze a fluorometric reaction, biotin, and avidin.

11. An assay for detection of CD30-L in a sample, comprising contacting the sample with an antibody immunoreactive with a CD30-L polypeptide encoded by a DNA sequence that will hybridize to the nucleotide sequence presented in SEQ ID NO:19 or SEQ ID NO:23 under severely stringent conditions, and detecting binding of the antibody to the CD30-L.

12. The assay of claim 11 wherein the CD30-L is present on cells.

13. The assay of claim 12, wherein the antibody is a monoclonal antibody.